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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,096	12/31/2000	Walter R. Thorson	778.044US1	8253
21186	7590	01/18/2005	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			NGUYEN, TU X	
			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 01/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/752,096	Applicant(s) THORSON ET AL	
	Examiner Tu X Nguyen	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 53-73 is/are pending in the application.
- 4a) Of the above claim(s) 21-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 53-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 8/27/04 have been fully considered but they are not persuasive.

Regarding claims 1 and 53, applicant's argument that "An integrated base station architecture according to the present invention provides a complete subscribers-system for up to 240 users in one antenna sector for base station and antenna deployed at the central office. Thus, it refers to a single antenna, and there is no suggestion of multiple modules". However, Struhsaker et al disclose "RF cards removed from slots 15 and 21" (see col.8 lines 2-3, and col.10 lines 56-65, the RF cards providing both receiving and transmitting signals which corresponds to transceiver modules. In addition, the base station shelf back plane can provide multiple slots 15-21 for multiple RF cards which the base station not only has one RF card but support plurality of RF cards) and couple to one another via a high speed serial link (see col.6 lines 56-57, Serial Peripheral Interface (SPI), as shown on figure 17, the shelf back plane providing SPI bus which supporting communication between RF cards and the shelf controller).

Applicants argue that Strusaker et al. fails to disclose a backhaul interface module as claimed.....There is no suggestion that the communication link is a module as claimed". However, Struskaer et al. disclose "a shelf controller card" provides for detection and configuration of any card placed in a shelf, call processing, systems management which corresponds to a backhaul interface in communication with the

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base station transceiver modules and configured to distribute received data to the plurality of base station transceiver modules (see col.8 lines 29-65).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-7, 53-56, 58-59, are rejected under 35 U.S.C. 103(a) as being unpatentable over Struhsaker et al. (US Patent 6,188,912) in view of Ishii et al. (US Patent 6,643,524).

Regarding claims 1 and 53, Struhsaker et al. disclose a wireless communication system, comprising:

a plurality of base station transceiver modules, each base station transceiver module configurable to operate as a standalone single-sector base station transceiver (see col.5 lines 49-62, "complete subscribers-system, one antenna sector" corresponds to "standalone single-sector").

A backhaul interface module in communication with the base station transceiver modules and configured to distribute received data to the plurality of base station transceiver modules (see 3 lines 1-31).

Struhsaker et al. fail to disclose serial link between base stations.

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Ishii et al. disclose serial link between base stations (see col.2 lines 5-11).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Struhsaker with the above teaching of Ishii et al. in order add base stations serially to extending coverage area.

Regarding claim 73, the modified Struhsaker et al. disclose everything as claim 1 above. More specifically, the modified Struhsaker et al. disclose each base station transceiver module to access the RF transceiver chain of other base station transceiver modules (see col.1 lines52 through col.2 line 11).

Regarding claims 2 and 54, Struhsaker et al. disclose controlled impedance media (see col.11 lines 37-45).

Regarding claims 3 and 55, Struhsaker et al. disclose an optical interface (see col.10 lines 1-6).

Regarding claims 4 and 56, the modified Struhsaker et al. disclose the backhaul interface module comprises a T1/E1 interface (see col.3 lines 20-21).

Regarding claims 6 and 58, the modified Struhsaker et al. disclose the backhaul interface module is incorporated in the base station transceiver modules (see col.3 lines 20-31).

Regarding claims 7 and 59, Struhsaker et al. disclose a system interface unit operatively coupled to at least one base station transceiver module via the HSSL (see col.9-10).

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4. Claims 8-20 and 60-72, are rejected under 35 U.S.C. 103(a) as being unpatentable over Struhsaker et al., in view of Ishii et al. and further in view of Dajer et al. (US Patent 6,587,448).

Regarding claims 12-13, 19-20 and 71-72, the combined Struhsaker et al. and Ishii et al. fail to disclose the base station transceiver modules are arranged in CDMA three-sector, six-carrier configuration.

Dajer et al. disclose base station transceiver modules are arranged in CDMA three-sector, six-carrier configuration (see col.7 lines 20-35). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of the modified Struhsaker with the above teaching of Dajer in order to provide base station modules configuration are arranged in any combinations between sector and carrier.

Regarding claims 8-11, 14-18 and 60-70, the combined Struhsaker et al. and Ishii et al. fail to disclose specifically base station transceiver modules are arranged in two-sector, one-carrier configuration; one-sector, nine-carrier configuration; one-sector, twelve-carrier configuration. However, Dajer et al. mention any desired numbers of sectors and carrier is applicable (see col.11 lines 50-60). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of the modified Struhsaker with the above teaching of Dajer et al. to provide base station modules configuration are arranged in any combinations between sector and carrier.

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5. Claims 5 and 57, are rejected under 35 U.S.C. 103(a) as being unpatentable over Struhsaker et al, in view of Ishii et al. and further in view of Mahany et al. (US Patent 5,949,776).

Regarding claims 5 and 57, the modified Struhsaker et al. fail to disclose a 10/100BaseTX interface.

Mahany et al. disclose 10/100BaseTX interface (see col.26 lines 16-40). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of the modified Struhsaker et al. with the above teaching of Mahany in order to provide industrial standard wired LAN Ethernet protocol.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Nguyen whose telephone number is 703-305-3427. The examiner can normally be reached on Monday through Friday from 8:30AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MAUNG NAY A, can be reached at (703) 308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

TN

January 3, 2005


NAY MAUNG
SUPERVISORY PATENT EXAMINER